IN THE CLAIMS

Claim 1 (Cancelled)

Claim 2 (Currently Amended) Method to retrieve RDS information by filtering and transforming an incoming multiplex signal *(m(t))* into an amplitude demodulated RDS signal *($m_{RDS}(t)$)*, characterized in that an amplitude modulated RDS signal *($m_c(t)$)* is derived on basis of an intermediate signal *($m_a(t)$)* obtained during an extraction of a stereo-difference signal *($m_d(t)$)* from the incoming multiplex signal, wherein ~~according to claim 1, characterized in that~~ the intermediate signal *($m_a(t)$)* is obtained by multiplying the multiplex signal *(m(t))* with the second harmonic of a pilot carrier *($2\sin(2\omega_{pil}t)$)*.--

B1

--3. (Currently Amended) Method according to claim 2 ~~claim 1~~, characterized in that the amplitude modulated RDS signal *($m_c(t)$)* is derived by subtracting a stereo-sum signal *($m_s(t)$)* multiplied by the second harmonic of a pilot carrier*($2\sin(2\omega_{pil}t)$)*from the intermediate signal *($m_a(t)$)*.--

--4. (Withdrawn) Method according to claim 1, characterized in that the amplitude modulated RDS signal *($m_c(t)$)* is set to be the intermediate signal *($m_a(t)$)*.--

Claims 5-13 (Canceled)

--14. (New) Method to retrieve RDS information by filtering and transforming an incoming multiplex signal into an amplitude demodulated RDS signal, characterized in that an amplitude modulated RDS signal is derived on basis of a first intermediate signal obtained

during an extraction of a stereo-difference signal from the incoming multiplex signal, wherein said first intermediate signal lies along a signal path separate from a signal path of an extraction of a stereo-sum signal from the incoming multiplex signal.

--15. (New) A method for retrieving RDS information from a multiplex signal, comprising the steps of:

obtaining, from said multiplex signal, a first intermediate signal from which a stereo-difference signal of said multiplex signal can be extracted;

extracting, from said multiplex signal, a stereo-sum signal; and

B1 cont

deriving an amplitude modulated RDS signal on the basis of said first intermediate signal, wherein

said obtaining of said first intermediate signal is separate from said extracting of said stereo-sum signal.

--16. (New) Method according to claim 15, characterized in that the intermediate signal is obtained by multiplying the multiplex signal with the second harmonic of a pilot carrier.

--17. (New) Method according to claim 15, characterized in that the amplitude modulated RDS signal is derived by subtracting a stereo-sum signal multiplied by the second harmonic of a pilot carrier from the intermediate signal.

--18. (New) Method according to claim 15, characterized by:

amplitude demodulation of the amplitude modulated RDS signal; and

decoding the amplitude demodulated RDS signal.

--19. (New) Method according to claim 18, characterized in that the amplitude demodulation of the amplitude modulated RDS signal is performed by a coherent amplitude demodulation with a carrier which is recovered by a COSTAS-loop from the amplitude modulated RDS signal.

B1 cont

--20. (New) Method according to claim 18, characterized in that the amplitude demodulation of the amplitude modulated RDS signal into a RDS baseband signal is performed by a complex demodulation.

--21. (New) Method according to claim 20, characterized in that the complex carrier needed for the complex demodulation is output from a digital PLL-circuit for pilot carrier recovery.

--22. (New) Method according to claim 20, characterized in that the carrier of the RDS signal is recovered with a COSTAS-loop locking to the RDS baseband signal.

--23. (New) Method according to claim 15, characterized in that the intermediate signal is obtained on basis of a sampling rate decimated stereo-difference signal.

--24. (New) Method according to claim 15, characterized by a sampling rate decimation to obtain carriers for the respective demodulations.

--25. (New) Method according to claim 15, characterized by a sampling rate decimation of the RDS baseband signal.

--26. (New) RDS demodulator, characterized in that it is adapted to operate according to the method defined in claim 14.

B1 Cont

--27. (New) The method of claim 15, wherein said multiplex signal fulfills the equation

$m_{simux}(t) = m_s(t) + A_{pil}(t) \cdot \sin(\omega_{pil}t) + m_d(t) \cdot \sin(2\omega_{pil}t) + m_{rds}(t) \cdot \cos(3\omega_{pil}t)$,

where $m_{simux}(t)$ is said stereo multiplex signal, $m_s(t)$ is said stereo-sum signal, $m_d(t)$ is said stereo-difference signal, $A_{pil}(t)$ is an amplitude of a pilot carrier, $m_{rds}(t)$ is an RDS signal, $m_{rds}(t) \cdot \cos(3\omega_{pil}t)$ is said amplitude modulated RDS signal and ω_{pil} is a frequency of said pilot carrier.

--28. (New) A method for retrieving RDS information from a multiplex signal, comprising the steps of:

coherently demodulating said multiplex signal employing a second harmonic of a pilot carrier of said multiplex signal so as to obtain a first intermediate signal; and

deriving an amplitude modulated RDS signal on the basis of said first intermediate signal.

--29. (New) The method of claim 28, wherein said coherent demodulation consists of multiplying said multiplex signal by said second harmonic of said pilot carrier.

--30. (New) The method of claim 28, wherein said first intermediate signal is a signal from which a stereo-difference signal of said multiplex signal can be extracted by one of a low-pass filtering or a combination of sampling rate decimation filtering and low-pass filtering.

--31. (New) The method of claim 28, comprising the steps of:

sampling rate decimation filtering said multiplex signal to obtain a fourth intermediate signal;

multiplying said fourth intermediate signal by said second harmonic of said pilot carrier so as to mirror said fourth intermediate signal in the frequency domain;

B1 Cont

sampling rate decimation filtering said first intermediate signal;

calculating a difference between said mirrored fourth intermediate signal and said sampling rate decimated first intermediate signal so as to obtain a difference signal;

mixing said difference signal with a complex signal consisting of said pilot carrier and a signal in a quadrature to said carrier so as to obtain a fifth intermediate signal.

--32. (New) The method of claim 31, comprising the steps of:

sampling rate decimation filtering said fifth intermediate signal;

low-pass filtering said sampling rate decimated fifth intermediate signal; and

coherently demodulating said low-pass filtered fifth intermediate signal on the basis of a carrier signal of said low-pass filtered fifth intermediate signal.

-- 33. (New) The method of claim 28, wherein said multiplex signal fulfills the equation

$$m_{simux}(t) = m_s(t) + A_{pil}(t) \cdot sin(\omega_{pil}t) + m_d(t) \cdot sin\ (2\omega_{pil}\ t) + m_{rds}(t) \cdot cos(3\omega_{pil}t).$$

were $m_{simux}(t)$ is said stereo multiplex signal, $ms(t)$ is a stereo-sum signal, $m_d(t)$ is a stereo-difference signal, $A_{pil}(t)$ is an amplitude of a pilot carrier, $m_{rds}(t)$is an RDS signal, $m_{rds}(t)\ cos(3\omega_{pil}\ t)$ is said amplitude modulated RDS signal and $\omega_{pil}t$ is a frequency of said pilot carrier.

-- 34. (New) An apparatus for retrieving RDS information from a multiplex signal comprising:

B1 Cont

means configured and adapted for obtaining, from said multiplex signal, a first intermediate signal from which a stereo-difference signal of said multiplex signal can be extracted;

means configured and adapted for extracting, from said multiplex signal, a stereo-sum signal; and

means configured and adapted for deriving an amplitude modulated RDS signal on the basis of said first intermediate signal, wherein

said means for obtaining said first intermediate signal is separate from said means for extracting said stereo-sum signal.

-- 35. (New) The apparatus of claim 34, wherein said multiplex signal fulfills the equation

$$m_{simux}(t) = m_s(t) + A_{pil}(t) \cdot sin(\omega_{pil}t) + m_d(t) \cdot sin\ (2\omega_{pil}\ t) + m_{rds}(t) \cdot cos(3\omega_{pil}\ t).$$

where $m_{simux}(t)$ is said stereo multiplex signal, $m_s(t)$ is a stereo-sum signal, $m_d(t)$ is a stereo-difference signal, $A_{pil}(t)$ is an amplitude of a pilot carrier, $m_{rds}(t)$ is an RDS signal, $m_{rds}(t) \cdot \cos(3\omega_{pil}t)$ is said amplitude modulated RDS signal and ω_{pil} is a frequency of said pilot carrier.

-- 36. (New) An apparatus for retrieving RDS information from a multiplex signal comprising:

first means configured and adapted for coherently demodulating said multiplex signal employing a second harmonic of a pilot carrier of said multiplex signal so as to obtain a first intermediate signal; and

B1 cont

second means configured and adapted for deriving an amplitude modulated RDS signal on the basis of said first intermediate signal.

-- 37. (New) The apparatus of claim 36, wherein said first means are multiplier means for multiplying said multiplex signal by said second harmonic of said pilot carrier.

-- 38. (New) The apparatus of claim 36, wherein said first intermediate signal is a signal from which a stereo-difference signal of said multiplex signal can be extracted by one of a low-pass filtering or a combination of sampling rate decimation filtering and low-pass filtering.

-- 39. (New) The apparatus of claim 36, comprising:

means configured and adapted for sampling rate decimation filtering said multiplex signal to obtain a fourth intermediate signal;

means configured and adapted for multiplying said fourth intermediate signal by said second harmonic of said pilot carrier so as to mirror said fourth intermediate signal in the frequency domain;

means configured and adapted for sampling rate decimation filtering said first intermediate signal;

means configured and adapted for calculating difference between said mirrored fourth intermediate signal and said sampling rate decimated first intermediate signal so as to obtain a difference signal; and

B1 Cont

means configured and adapted for mixing said difference signal with a complex signal consisting of said pilot carrier and a signal in quadrature to said pilot carrier so as to obtain a fifth intermediate signal.

-- 40. (New) The apparatus of claim 39, comprising:

means configured and adapted for sampling rate decimation filtering said fifth intermediate signal;

means configured and adapted for low-pass filtering said sampling rate decimated fifth intermediate signal; and

means configured and adapted for coherently demodulating said low-pass filtered fifth intermediate signal on the basis of a carrier signal of said low-pass filtered fifth intermediate signal.

-- 41. (New) The apparatus of claim 36, wherein said multiplex signal fulfills the equation

$$m_{simux}(t) = m_s(t)+A_{pil}(t)\cdot sin(\omega_{pil}t)+M_d(t)\ sin(2\omega_{pil}t)+m_{rds}(t)\cdot cos(3\omega_{pil}t),$$

where $m_{simux}(t)$ is said stereo multiplex signal, $m_s(t)$ is a stereo-sum signal, $m_d(t)$ is a stereo-difference signal, $A_{pil}(t)$ is an amplitude of a pilot carrier, $m_{rds}(t)$ is an RDS signal, $m_{rds}(t)\ cos(3\omega_{pil}t)$ is said amplitude modulated RDS signal and ω_{pil} is a frequency of said pilot carrier.

B1 cont

-- 42. (New) An apparatus for retrieving RDS information from a multiplex signal, comprising:

a first signal path, via which a stereo-difference signal is extracted from said multiplex signal;

a second signal path, separate from said first signal path, via which a stereo-sum signal is extracted from said multiplex signal; and

a third signal path, branching from said first signal path, via which said RDS information is retrieved.